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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,970	09/29/2003	Yacov Yacobi	MS1-393USC1	3959
22801	7590	07/20/2006	EXAMINER	
LEE & HAYES PLLC 421 W RIVERSIDE AVENUE SUITE 500 SPOKANE, WA 99201			LAVIN, CHRISTOPHER L	
			ART UNIT	PAPER NUMBER
			2624	

DATE MAILED: 07/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/673,970	Applicant(s) YACOBI, YACOV	
	Examiner Christopher L. Lavin	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>09/27/03, 04/22/04, 12/22/04,</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. Figure 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 – 3, 5 – 7, 12, 14 – 17 and 19 – 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamamoto et al ("A Method of Image Watermarking which can Detect all Illegal Users in Collusion", 1998 Symposium on Cryptography and Information Security, Hammanako, Japan, January 28-31, 1998, English language translation).

In regards to claim 1, One or more protected digital objects embodied on one or more computer-readable media, individual digital objects being embedded with at least one fingerprinting word produced in accordance with a method comprising: defining a

plurality of fingerprinting words, each fingerprinting word being unique and containing at least one spread sequence (Sections 3 and 4); and assigning individual fingerprinting words to individual respective entities, the fingerprinting words serving to identify an entity to which it is assigned (Section 4); said fingerprinting words being structured to permit a collusion analysis to ascertain identities of potential colluders who change an associated fingerprinting word (Section 4 and 5).

In regards to claim 2, The one or more protected digital objects of claim 1, wherein each fingerprinting word contains a plurality of spread sequences (Sections 3 and 4).

In regards to claim 3, The one or more protected digital objects of claim 1, wherein the defining of the plurality of the fingerprinting words comprises selecting a length for the fingerprinting words, the length being a function of a number of colluders that are desired to be defended against and an error rate ϵ (Sections 3 – 5).

In regards to claims 5 – 7, Yamamoto teaches that a spread spectrum watermark may be applied to an image (which could be a document or a video frame, however this is not explicitly stated). Yamamoto does not explicitly teach that the watermark could be applied to a document, video object, or a music object. Official notice is taken that is well known in the art to apply spread spectrum watermarks to all three of these items, therefore using Yamamoto's spread spectrum watermark would have been obvious to one having ordinary skill in the art.

In regards to claim 12, A Γ -code data structure configured for use in an embedding process for protecting digital data, the Γ -code data structure comprising: a

memory (Yamamoto's operation must be performed using a computer and therefore requires a memory.); a plurality of spread sequences in the memory, the spread sequences being arranged in blocks that are combinable to define fingerprinting words that are assignable to individual entities to which protected objects are to be distributed (Sections 3 – 5); and said fingerprinting words being structured to permit a collusion analysis to ascertain identities of potential colluders who change an associated fingerprinting word (Sections 4 and 5).

In regards to claim 14, One or more protected objects comprising: digital data embodied on one or more computer-readable media (Yamamoto's operation must be performed using a computer and therefore requires a memory.); and a fingerprinting word embedded in the digital data, the fingerprinting word containing at least one spread sequence, the fingerprinting word being associated with an entity to which the object is to be, or has been distributed (Sections 3 – 5); said fingerprinting word being structured to permit a collusion analysis to ascertain one or more identities of potential colluders who change the fingerprinting word (Sections 4 – 5).

In regards to claim 15, The one or more protected objects of claim 14, wherein the fingerprinting word contains a plurality of Γ -symbols, each Γ -symbol containing at least one spread sequence (Sections 4 – 5).

In regards to claim 16, The one or more protected objects of claim 15, wherein each Γ -symbol contains a plurality of spread sequences (Sections 4 – 5).

In regards to claim 17, The one or more protected objects of claim 16, wherein each fingerprinting word contains the same number of Γ -symbols (Sections 4 – 5).

In regards to claims 19 – 21, Yamamoto teaches that a spread spectrum watermark may be applied to an image (which could be a document or a video frame, however this is not explicitly stated). Yamamoto does not explicitly teach that the watermark could be applied to a document, video object, or a music object. Official notice is taken that is well known in the art to apply spread spectrum watermarks to all three of these items, therefore using Yamamoto's spread spectrum watermark would have been obvious to one having ordinary skill in the art.

In regards to claim 22, One or more computing devices embodying the one or more protected objects of claim 14 (A computer is required for Yamamoto's program to run.).

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422

F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1 and 8 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 10 and 1 (respectively) of U.S. Patent No. 6,754,364. Although the conflicting claims are not identical, they are not patentably distinct from each other because both claims 10 and 1 of the applicant's patent claim everything included in claims 1 and 8 of the application. It should be noted that other claims in this application also suffer from the same problem; however, these two claims are being provided as an illustration to the applicant.

Allowable Subject Matter

6. Claims 8 – 11 would be allowed if the double patenting issues were resolved.

7. Claims 4, 13, and 18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and if the double patenting issues were resolved.

8. The following is a statement of reasons for the indication of allowable subject matter:

The art of record does not teach nor does it suggest the specific features called for in the claims. In particular Γ -symbols containing 2c-1 spread sequences is not taught in Yamamoto or Boneh, the two closest teachings. There is no reason to modify either reference to include this requirement.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

10. US Pat. 5,665,018 teaches of watermarking that is resilient to collusion.


11. US Pat. 6,901,515 discusses several pieces of prior art in the area of watermarking that is resilient to collusion.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher L. Lavin whose telephone number is 571-272-7392. The examiner can normally be reached on M - F (8:30 - 5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh M. Mehta can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Christopher Lavin



BRIAN WERNER
PRIMARY EXAMINER